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Cardiovascular Health Trajectories of Afro-Caribbean Immigrants in the United States: A Systematic Literature Review on Immigrant Advantage, Generational Change, and Structural Influences (2019-2025).

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Afro-Caribbean immigrants are a growing subgroup among the immigrant population in the United States. Yet their cardiovascular health trajectories are unexplored. Although some studies on immigration health have demonstrated a persistent immigrant health advantage, others indicate an evident decline over time and across generations. This study aims to synthesize the influencing factors linked to worsened cardiovascular outcomes for Afro-Caribbean immigrants migrating to the United States from their country of origin. This systematic review addresses the following research question: How do the length of U.S. residence, generational status, and key demographic and structural determinants influence cardiovascular health outcomes among Afro-Caribbean immigrants in the United States? Searches were performed in PubMed, Taylor & Francis, ProQuest, JSTOR, and SpringerLINK, yielding a total of 174 records from keyword searches published between 2019 and 2025. Studies were included in the final review if they focused on Caribbean-origin Black immigrants living in the United States, examined cardiovascular or cardiometabolic health outcomes between 2019 and 2025, and were peer-reviewed empirical articles published in English. Studies on non-Caribbean populations, non-empirical designs, or those without a cardiovascular focus were excluded. Findings highlight the influence of acculturation, generational status, and structural determinants on cardiovascular outcomes. Overall, evidence suggests the immigrant health advantage weakens over time, emphasizing the need for longitudinal, intergenerational equity-centered research to inform culturally responsive interventions.

POSITIONALITY

Mia Moore, a fourth-year undergraduate at the University of Southern California majoring in Health and Human Sciences with a minor in Law and Social Justice, approaches public health research through a lens shaped by hands-on community engagement and global outreach. Her leadership in campus organizations, teaching in local schools, and participation in health missions in Central America inform her commitment to health equity and culturally responsive care. Dr. Kruti S. Chaliawala, an assistant professor at Boise State University, brings over a decade of lived experience as an international student to her research on mental health equity, minority stress, and sexual health. Her work challenges dominant narratives and centers marginalized voices, particularly those of international students, while bridging cultural contexts to advance inclusive public health solutions. Together, their positionalities reflect a shared commitment to equity-driven scholarship, grounded in lived experience, advocacy, and transformative action.

INTRODUCTION

Cardiovascular disease (CVD) is the leading cause of mortality in the United States (U.S.).[1-4] Evidence indicates profound impacts on Black populations in the U.S., including Afro-Caribbean immigrant subgroups, who may experience elevated cardiovascular risk (e.g., hypertension, diabetes, obesity) influenced by social determinants of health.[1-4] Afro-Caribbean immigrants comprise a rapidly growing demographic within the Black diaspora, accounting for more than 50% (four million) of the Black immigrant population in the U.S.[3-5] Afro-Caribbean immigrants are individuals of African descent whose ancestral roots lie in the Caribbean (West Indies) and who do not identify as Hispanic.[6] Although genetic predispositions contribute to CVD burden for Afro-Caribbean immigrants, the etiology is primarily shaped by social determinants of health.[1-4,7,8] Afro-Caribbean immigrants remain underrepresented in cardiovascular health (CVH) research despite their demographic growth, particularly in comparison to African Americans and other immigrant groups.[4]

Studies highlight a *healthy immigrant effect,* wherein foreign-born individuals often exhibit more favorable cardiometabolic profiles upon arrival in the U.S. compared to their U.S.-born counterparts.[3-5,8-10] This phenomenon has been observed across multiple immigrant populations and is frequently attributed to protective health advantages associated with immigrant status, particularly in the early years of migration. However, evidence also suggests that these advantages may not persist over time, particularly as immigrants navigate acculturation pressures, changes in diet and physical activity, and exposure to U.S. social and structural conditions.[4,5,7]

The CVH trajectories of Afro-Caribbean immigrants are significant for public health, clinical practice, and health equity initiatives in the U.S. As this population continues to grow, understanding the unique patterns of risk in Afro-Caribbeans is critical for designing culturally responsive interventions. Failure to address these disparities may result in significant gaps in health equity, particularly as the advantages of immigrants erode over time. Additionally, the preliminary literature reveals a disproportionate representation of Afro-Caribbean immigrants compared to their African and White counterparts, underscoring a critical gap in the existing literature.[3] Hence, the current literature review focuses on exploring the factors of Afro-Caribbean CVH trajectories by addressing the following research question:

1. How do the length of U.S. residence, generational status, and key demographic and structural determinants influence cardiovascular health outcomes among Afro-Caribbean immigrants in the United States?

METHODS

A comprehensive search was conducted through the registered collection of databases, journals, and articles, including PubMed, Taylor & Francis, ProQuest, JSTOR, and SpringerLink, using the following terms: U.S., Caribbean, Immigrant, Hypertension, and Cardiovascular Health. These databases were chosen due to the accessibility and availability of full-length articles from the university library. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were used to identify relevant articles for this review.[11] All the articles were then reviewed, and appropriate studies were identified for the current literature review. The study criteria for inclusion were articles that were: (1) focus on Caribbean-origin Black immigrants (e.g., Haitian, Jamaican, Trinidadian, Guyanese) (2) examine CVH outcomes, including hypertension prevalence or incidence, CVD risk, heart disease, blood pressure control, or related comorbidities such as obesity and diabetes, (3) peer-reviewed empirical studies, systematic or narrative reviews, and meta-analyses were included, and (4) specifically report on CVH, be published within the last six years (2019–2025), and be available in English in the United States. Including studies from the past six years ensures that the findings capture current patterns in cardiovascular health, migration, and healthcare access among Afro-Caribbean immigrants. This approach also enhances the review's credibility and relevance, as recent research uses stronger methodologies, disaggregated analyses, and insights that inform today's public health and health equity efforts. Studies were excluded if they did not include these populations as their study sample, health outcome, or timeframe requirements, or if they were not peer-reviewed research publications (e.g., non-peer reviewed commentaries, editorials, or non-empirical reports). A total of six articles fit the inclusion criteria. The screening and data extraction processes were conducted by a single reviewer. Titles and abstracts were screened for relevance based on the predefined inclusion and exclusion criteria. Full-text screening was then performed to confirm eligibility.[11] Although dual-reviewer screening is recommended in systematic reviews, it was not feasible for this educational project; therefore, no independent second reviewer was involved. Any uncertainties about article eligibility were resolved through discussion with the co-PI. Data extraction was completed manually using a structured template that captured study characteristics, population details, cardiovascular health (CVH) outcomes, and key determinants. The PRISMA flow diagram (Figure 1) reflects the number of records at each stage, including title/abstract screening and full-text review.[11] A narrative synthesis approach was used to summarize and compare findings across the included studies.[11] Extracted data were organized by major themes related to cardiovascular health determinants, including behavioral, social, and structural factors, using Microsoft Excel. Patterns, similarities, and differences across studies were identified and synthesized qualitatively. Although no standardized tool was applied, attention was given to methodological quality indicators such as clarity of research question, appropriateness of study design, and completeness of outcome reporting. The study protocol or the study was not pre-registered. The factors impacting CVH outcomes are discussed thoroughly in the results section.

RESULTS

The database search across PubMed, Taylor & Francis, ProQuest, JSTOR, and SpringerLink yielded 176 records. After removal of 2 duplicates, 174 unique articles were screened by title and abstract. During this stage, 168 studies were excluded for failing to focus on Afro-Caribbean populations, lacking cardiovascular or cardiometabolic outcomes, or being conducted outside the United States. Full-text review was conducted for 8 articles, of which 2 were excluded due to absence of cardiovascular outcomes, insufficient disaggregation of Afro-Caribbean populations, publication outside the 2019–2025 timeframe, or failure to meet peer-review criteria. Ultimately, six studies met all inclusion criteria and were included in the final qualitative synthesis (Table 1). Across the six studies, consistent evidence supported an initial immigrant cardiovascular health advantage among first-generation Afro-Caribbean immigrants, characterized by lower prevalence of hypertension, diabetes, obesity, and smoking. However, this advantage di-

minished with longer U.S. residence and across generations. Studies demonstrated higher cardiovascular risk among immigrants residing in the U.S. for ⩾10–15 years and among second-generation Afro-Caribbeans. Behavioral factors alone did not fully explain these patterns; structural determinants such as acculturation, length of residence, generational status, and discrimination emerged as key contributors to worsening cardiovascular outcomes. Despite heterogeneity in study design and sample characteristics, the included studies identified several recurring factors associated with cardiovascular health outcomes among Afro-Caribbean immigrants. The key factors shaping Afro-Caribbean CVH trajectories are identified and discussed in greater detail below.

Acculturation: Acculturation refers to the psychological and cultural adjustments that take place when individuals or groups interact continuously with a new cultural environment.[5] As stated initially by Berry's Model of Acculturation, it explains how people navigate both their original and host cultures through four strategies: (1) assimilation, (2) separation, (3) integration, and (4) marginalization.[12] As immigrants become more acculturated, increased exposure to the host country's environment and lifestyle can influence these strategies, leading to shifts in health behaviors or a rise in health risk factors over time.[5,13] Prolonged exposure to American culture can lead to behavioral and lifestyle changes that negatively affect the CVH of Afro-Caribbean immigrants living in the US.[3,10,14] Across the included studies, diet and physical activity emerged as the most frequently examined domains related to acculturation and cardiovascular health outcomes[3,5]

Diet: Diet is a fundamental determinant of CVH and one of the seven key metrics used to assess cardiovascular risk.[5] In a recent study of 1,691 Afro-Caribbean immigrants in New York City (non-Hispanic Black adults born in Guyana, Haiti, or Jamaica), diet was the least ideal component of CVH, with few participants meeting the recommendation of consuming five or more servings of fruits and vegetables per day.[5] Additionally, Anikpo et al.[13] explain that acculturation level is associated with individual health risk behaviors such as diet, noting that immigrants migrating to the United States may gradually adopt less healthy dietary patterns over time. Among the included studies, dietary quality was consistently identified as the least optimal cardiovascular health component among Afro-Caribbean immigrants, particularly among individuals with longer U.S. residence.[5,13]

Physical activity: Across the included studies, physical activity emerged as a commonly assessed component of cardiovascular health among Afro-Caribbean immigrants. In a large cross-sectional study of Afro-Caribbean immigrants residing in New York City, Thomas et al.[5] found that 72% of Guyanese (N = 369) , 70% of Haitians (N = 291), and 78% of Jamaicans (N = 1031) met the "ideal" physical activity criterion (i.e., reporting engagement in exercise or physical activity beyond their job within the past 30 days). Despite relatively high prevalence of ideal physical activity overall, differences were observed by duration of U.S. residence. Included studies reported higher levels of physical activity among Afro-Caribbean immigrants with shorter U.S. residence, with declines observed among those residing in the U.S. for longer durations.[5,13] Over generations, these changes align Afro-Caribbean activity levels more closely with those of African Americans, underscoring how acculturation contributes to reduced movement and elevated cardiovascular risk.[14] These findings suggest variability in physical activity patterns across subgroups and residence duration within the Afro-Caribbean immigrant population.

Length of Residence: The literature suggests that longer durations of residence in the U.S. are consistently associated with declines in CVH among immigrant populations.[2,5,13] Length of residence reflects how social, cultural, and migration contexts shape CVH trajectories.[13] Over time, prolonged residence in the U.S often leads to the erosion of protective habits discussed in preliminary literature that are maintained in immigrants' home countries.[5]

Among Afro-Caribbean immigrants, Thomas et al.[5] found that Guyanese and Haitian immigrants residing in the United States for 10 years or more had significantly higher odds of poor or intermediate CVD compared to those with shorter stays. However, this association was not observed among Jamaicans, possibly due to their geographic proximity to the U.S and sustained cultural ties to their home country.[5] Anikpo et al.[13] emphasize that Black immigrant populations are highly heterogeneous with unique risk and resilience patterns, as each community faces different structural, dietary, and socioeconomic contexts after migration. Such differences underscore the need for disaggregated data to unmask subgroup variations in cardiovascular trajectories.[15] Another study reported that Afro-Caribbean immigrants who had lived in the U.S. for more than 15 years exhibited higher rates of hypertension, stroke, and circulatory problems compared to those with shorter residence.[14] Importantly, researchers note that neither discrimination, stress, nor health behavior could fully explain the decline, implying structural and intergenerational mechanisms were involved.[14] Longer residence in the U.S appears to erode the initial immigrant health advantage for Caribbean-born Blacks, with health outcomes increasingly resembling those of U.S.-born African Americans who already experience higher rates of obesity, hypertension, and diabetes.[14] Overall, the evidence positions length of residence as an important indicator of within-generation deterioration in cardiovascular health among Afro-Caribbean immigrants.[3,5,10,13,14]

Generational Status: Generational status provides a distinct framework with independent relevance for understanding CVH beyond individual-level measures as discussed above. Length of residence reflects within-generation time spent in the US, whereas generational status captures the timing and duration of exposure across the life course, including early-life and intergenerational exposure to U.S. social, educational, and healthcare systems.[5,7,14] Ifatunji et al.[14] found that second-generation Afro-Caribbeans were more likely to be overweight or obese compared to their first-generation Afro-Caribbean counterparts.[14] They have also reported higher levels of stress and

Table 1. The table demonstrates an overview of the studies included in the systematic literature review analysis

	References	Population	Sample Size (*n*)	Type of Study	Theme	Findings	Implications
1	Thomas SC, Umer A, Commodore-Mensah Y, Davidov D, Abildso CG. Length of residence and Cardiovascular Health among Afro-Caribbean immigrants in New York City. *Journal of Racial and Ethnic Health Disparities*. 2019;6(3):487-496. https://doi.org/10.1007/s40615-018-00547-8	Afro-Caribbean immigrants in New York City (non-Hispanic Black adults born in Guyana, Haiti, or Jamaica).	Total: 1,691 Guyana: 369 Haiti: 291 Jamaica: 1,031	Cross-sectional study Data source: 2010–2014 New York City Community Health Survey	Examining the association between length of residence and cardiovascular health (CVH) among Afro-Caribbean immigrant subgroups.	Longer U.S. residence (≥10 years) was associated with higher odds of poor/intermediate CVH	Evidence of ethnic subgroup differences in how acculturation affects CVH. Guyanese and Haitian immigrants may be more vulnerable to cardiovascular risk over time in the U.S. Culturally tailored interventions needed to address diet, physical activity, and prevention.
2	Ifatunji MA, Faustin YF, Wallace DD. Second-generation decline: Disparities in Cardiovascular Disease Between African Americans and Afro Caribbeans. *Sociological Focus*. 2024;57(3):414-430. https://doi.org/10.1080/00380237.2024.2345601	African Americans and Afro-Caribbean immigrants (first- and second-generation) ≥25 years old in the United States.	Total: 4,159 African Americans: 2,870 First-generation Afro Caribbeans: 984 Second-generation Afro Caribbeans: 305	Cross-sectional study Data source: National Survey of American Life (NSAL), 2001–2003	Disparities in cardiovascular disease (CVD) between African Americans and Afro-Caribbeans with special focus on second-generation decline.	Second-generation Afro Caribbeans had the worst cardiovascular outcomes, surpassing both African Americans and first-generation immigrants.	Disaggregate Black populations by nativity and generation when studying health disparities. Culturally informed policies needed to address unique vulnerabilities of second-generation Afro Caribbeans.
3	Baptiste DL, Turkson-Ocran RA, Ogungbe O, et al. Heterogeneity in cardiovascular disease risk factor prevalence among White, African American, African immigrant, and Afro-Caribbean adults: insights from the 2010–2018 National Health Interview Survey. *Journal of the American Heart Association*. 2022;11(17):e025235. https://doi.org/10.1161/JAHA.122.025235	White, African American (AA), African immigrant (AI), and Afro-Caribbean (AC) ≥18 years old in the United States	Total: 452,997 White: 370,362 African American: 73,450 African immigrant: 4,071 Afro-Caribbean: 5,114	Cross-sectional comparative analysis using pooled NHIS data, 2010–2018	Heterogeneity in CVD risk factors (hypertension, diabetes, overweight/obesity, and smoking) among Black ethnic subgroups compared with White adults.	ACs had lower prevalence of CVD risk factors than AAs, but risk increased with longer U.S. residence (≥10 years).	Race alone does not explain disparities; nativity and ethnic background are critical factors. Immigrant health advantage among AIs and ACs erodes with longer U.S. residence.
4	Lekoubou Looti A, Ovbiagele B, Markovic D, Towfighi A. All-cause, cardiovascular, and stroke mortality	U.S.-born Black individuals	Total: 64,717 U.S.-born:	Cross-sectional cohort	Examining whether nativity	Foreign-born Black individuals had lower all-cause and cardiovascular mortality than	Policy and clinical strategies should consider sociodemographic and

	among foreign-born versus US-born individuals of African ancestry. *Journal of the American Heart Association*. 2023;12(9):e026331. https://doi.org/10.1161/JAHA.122.026331	foreign-born and Black individuals (Caribbean, South & Central America, and Africa) aged 25-74 in the United States	57,141 (88.3%) Caribbean, South & Central America: 5,205 (8.0%) Africa: 2,371 (3.7%)	analysis using NHIS data, 2000–2014. Used Cox regression models to estimate hazard ratios (HRs).	(foreign-born vs. U.S.-born) is associated with differences in cardiovascular, and stroke mortality among Black adults in the U.S.	U.S.-born Black individuals.	structural determinants when addressing cardiovascular and stroke disparities.
5	Anikpo I, Dodds L, Mesa RA, Tremblay J, Vilchez L, Elfassy T. Length of time in the United States and cardiometabolic outcomes among foreign- and US-born Black adults. *Journal of Racial and Ethnic Health Disparities*. 2025;12(3):640-648. https://doi.org/10.1007/s40615-023-01902-0	U.S.-born non-Hispanic, U.S.-born/foreign-born Hispanic, African-born, and Caribbean/ Central American (CA)-born ≥18 years in the U.S.	Total: 10,034 81% U.S.-born non-Hispanic 5% Hispanic (U.S.- and foreign-born) 6% African-born 6% Caribbean/ CA-born	Cross-sectional analysis using nationally representative NHIS data, 2016–2018	Assessing how length of time in the U.S. influences cardiometabolic outcomes (obesity, hypertension, diabetes, and high cholesterol) among foreign- vs. U.S.-born Black adults.	Caribbean/CA-born individuals with <15 years in the U.S. had 64% lower odds of obesity and 63% lower odds of hypertension compared to those with ≥15 years.	Confirms the "healthy immigrant effect": foreign-born Black adults initially have better cardiometabolic health than U.S.-born counterparts. Suggests that acculturation and longer U.S. residence weaken this advantage, particularly for Caribbean/ CA-born groups.
6	Baiden D, Parry M, Nerenberg K, Hillan EM, Dogba MJ. Connecting the dots: structural racism, intersectionality, and cardiovascular health outcomes for African, Caribbean, and Black mothers. *Health Equity*. 2022;6(1):402-405. https://doi.org/10.1089/heq.2021.0077	African, Caribbean, and Black (ACB) women at risk of hypertensive disorders of pregnancy (HDP) and long-term cardiovascular outcomes.	N/A	Perspective /Commentary	Links structural racism and intersectionality to CVH inequities among ACB mothers. How racism intersects with gender, socioeconomic status, and immigration status to shape risks.	ACB women born outside the U.S. had lower preeclampsia risk than U.S.-born counterparts; however, risk increased after >10 years in the U.S. Structural racism (e.g., inadequate care, police brutality, community-level stressors) contributes to CVD through chronic stress and barriers to healthcare access.	Policies and health interventions must adopt an intersectionality-informed approach to maternal and CVH.

discrimination, lower physical activity, and greater CVD prevalence relative to both first-generation Afro-Caribbeans and African Americans.[14] Another study highlighted the intergenerational consequences of structural racism, noting its persistent impact on the health outcomes of Black mothers in ways that reverberate across generations.[15] Across the reviewed studies, second-generation Afro-Caribbean immigrants consistently exhibited less favorable CVH profiles than their first-generation counterparts, even after accounting for socioeconomic indicators.[5, 7,14] These findings reflect that generational status operates as an independent determinant of CVH, reflecting cumulative and developmentally timed exposure to U.S. structural conditions.

Demographic Factors: The literature discusses demographic variables (e.g., age, sex, education, English proficiency, and migration background) in relation to cardiovascular outcomes among Afro-Caribbean Black immigrant populations. Across all six studies, age consistently predicts poorer cardiovascular outcomes (higher hypertension, diabetes, or mortality).[3,5,10,13-15] After fully adjusting for age, Anikpo et el.[13] found that older participants had higher odds of hypertension and diabetes. In Thomas et al.'s regression analysis, age was a negative predictor of ideal CVH, with each additional year of age resulting in a slight decrease in the likelihood of meeting ideal CVH metrics ($p < 0.001$).[5]

Education and English proficiency further shape CVH trajectories.[3,5,10,13-15] One study found that first-generation Afro-Caribbeans were more likely than African Americans to have at least some college education (45% vs 30%). Although second-generation Afro-Caribbeans had the highest education levels (57%), they also showed higher odds of CVD, illustrating the "diminishing returns" of education among racialized minorities.[14] Moreover, in a cross-sectional analysis controlling for education, the mortality advantage of foreign-born adults narrowed, indicating that education partially explained better CVD outcomes. Although education is shown to enhance health literacy and access, it does not eliminate CVD mortality gaps once acculturation and systemic barriers are taken into account.[10] Subgroup analysis also indicates differences in English proficiency: Jamaican immigrants who generally have greater English fluency tend to experience more favorable cardiovascular outcomes.[3,5] In contrast, Haitian immigrants often face greater barriers to healthcare services due to limited language proficiency, lower income, and the heightened stress associated with their double minority status as both non-native English speakers and Black individuals.[5]

Migration context and proximity to the U.S. influence acculturation and access to support networks.[5,10.13] In contrast to Haiti, Jamaica, and Guyana, both have close geographic proximity to the U.S., which provides more opportunities for frequent travel to their home countries, stronger support networks, and greater linguistic assimilation that could positively influence their health outcomes.[3, 5] However, Baptise et al.[3] note that close geographic and cultural proximity leads to earlier and longer exposure to U.S. lifestyle risks, eroding cardiovascular advantage faster than Africans who migrate later or remain more culturally distinct. Lekoubou et al.[10] found that migration proximity fosters earlier arrival but contributes to faster convergence toward U.S.-born cardiovascular risk patterns. These findings suggest that proximity to the U.S. is a double-edged factor for migration. It facilitates cultural integration, but also accelerates acculturation-related health deterioration, including CVD and associated structural determinants (neighborhood poverty, racial stress, diet acculturation).[3, 10,13,14]

Finally, research shows that women often experience reinforced or greater disparities in cardiovascular outcomes, displaying greater vulnerability to obesity, hypertension, and maternal cardiovascular complications, as well as losing the immigrant health advantage faster than men.[3,5,,13,14,15] A study reported lower overall CVH scores for Afro-Caribbean immigrant women than men, highlighting that gender differences persisted even after adjustment for age and residence time.[5] Another study by Ifatunji et al.[14] found that female second-generation Afro-Caribbeans exhibited higher CVD prevalence despite comparable or better education and income than men. Authors linked this to stress exposure, care-work burdens, and limited healthcare engagement, suggesting gendered acculturation effects for Black immigrant women.[14]

Thus, gender (and by extension the intersection of gender with race/ethnicity and immigration status) is a lens through which cardiovascular risk must be understood for Afro-Caribbean immigrant populations.

Structural Racism and Discrimination: Structural racism and discrimination emerged as key factors influencing CVH among Afro-Caribbean immigrants.[14,15] A recent study found that participants originating from predominantly Black societies in Africa were less likely to experience racial discrimination before migration. In contrast, Afro-Caribbean immigrants from more racially diverse societies reported greater pre-migration exposure to racial hierarchy and stigma, which can influence their post-migration CVH.[13] Foreign-born and second-generation Black immigrants experienced discrimination differently, with second-generation individuals reporting higher stress related to U.S. racial dynamics.[14]

One study focused explicitly on African, Caribbean, and Black (ACB) mothers.[15] Highly educated Caribbean women, particularly those of Afro-Caribbean descent, experience 5 times higher risk of pregnancy-related cardiovascular death compared with White women at similar or higher education levels.[15] The study argues that whether education is obtained in the Caribbean or the United States, it does not protect against the effects of systemic racism, as highly educated Black women continue to experience racial bias and structural disadvantage in healthcare.[15] Continued exposure to racism precipitates chronic stress, which contributes to hypertension, left ventricular hypertrophy, and heart failure.[15] Additionally, exposure to discrimination contributes to the compounding behaviors discussed above, such as reduced physical activity, poor diet, and physiological stress responses that elevate cardiovascular risk. The availability of social support and community networks can

buffer these structural stressors.[13] Collectively, these findings indicate that exposure to structural racism and discrimination, both before and after migration, significantly contributes to CVH disparities among Afro-Caribbean immigrants.[13,15]

Five studies used cross-sectional analyses of national or regional survey data, limiting causal inference, while one employed a conceptual design to examine structural determinants of cardiovascular health among Black Afro-Caribbean women. Cardiovascular outcomes and behavioral exposures were largely self-reported, introducing potential recall and misclassification bias. Some included studies relied on broad nativity or ethnic categories that aggregated Afro-Caribbean individuals with other Black populations, reducing subgroup specificity. Heterogeneity in exposure definitions and outcome measures limited direct comparability across studies. Despite these limitations, the included studies demonstrated generally consistent directional patterns, particularly declines in CVH with longer U.S. residence and across generations. Overall, the synthesized evidence highlights important gaps for longitudinal and subgroup-specific research.

DISCUSSION

Although the literature reviewed yielded mixed findings regarding the magnitude and direction of cardiovascular disparities, several consistent patterns emerged. Afro-Caribbean immigrant populations initially displayed a health advantage relative to U.S.-born Black adults, often characterized by lower prevalence of hypertension, diabetes, obesity, and cardiovascular mortality.[3,5,10,13,14] However, this advantage diminished with longer U.S. residence and across generations, supporting the concept of a "healthy immigrant effect" followed by acculturation-related decline.[3,5,10,13,14] Importantly, the evidence suggests that CVH disparities cannot be attributed to race alone; instead, the interaction of nativity, duration of residence, and exposure to structural inequities plays a central role.[3,5,13-15]

Dietary patterns emerged as a key pathway linking acculturation and CVH. Broader literature indicates that Afro-Caribbeans residing in their countries of origin experience lower rates of diet-related chronic conditions than those in the U.S., suggesting post-migration dietary change as a contributor to worsening CVH.[16,17] Qualitative and quantitative studies document shifts from traditional diets rich in fruits, vegetables, legumes, and fresh fish toward Westernized diets high in processed foods.[16,17] These changes reflect both cultural adaptation and structural constraints, including food cost, availability, and neighborhood food environments, which may limit access to culturally familiar and nutritionally optimal foods.[17]

Physical activity patterns similarly reflect the influence of environmental and structural context. While physical activity is protective against CVD, immigrants' ability to maintain activity levels is shaped by factors such as neighborhood design, regional infrastructure, and transportation access.[18-23] Evidence suggests that these environmental factors do not operate uniformly across racial and ethnic groups and may constrain activity among Afro-Caribbean immigrants, particularly in regions with higher baseline inactivity.[24-27] In Afro-Caribbean cities such as Kingston, Bridgetown, and Port of Spain, green spaces have historically served as areas that not only offer opportunities for physical activity but also support mental and social well-being through relaxation and spiritual reflection.[28-30] These spaces foster a shared sense of belonging within Afro-descendant communities and provide essential ecosystem services while preserving cultural practices tied to nature.[31] However, these protective practices often diminish following migration, as acculturative stress, or the psychosocial strain associated with adapting to U.S. environments, may reduce physical activity over time, although residence in immigrant enclaves may partially buffer these effects.[22]

Disparities emerge with increased length of residence in the U.S., as shown by Thomas et al.[5] where Guyanese immigrants residing in the U.S for ⩾10 years had 3.5 times higher odds of poor or intermediate CVD health compared to recent arrivals (OR = 3.51; 95% CI [1.03, 11.95]), while Haitian immigrants had eight times higher odds (OR = 8.02; 95% CI [1.88, 34.12]).[5] Thomas et al.[5] emphasized that these patterns were not uniform across the Afro-Caribbean population; significant variations exist among ethnic subgroups (e.g., Jamaicans, Trinidadians, and Haitians) and between foreign-born and U.S.-born Afro-Caribbeans.

Generational status provides a different context by capturing intergenerational exposure to U.S. social and structural environments. Broader literature shows that first-generation Black immigrant youth exhibit lower rates of obesity and overweight than later generations, with subsequent generations experiencing poorer cardiometabolic and psychosocial outcomes.[32,33] These patterns align with findings from the included studies and underscore the role of life-course and intergenerational processes in shaping CVH.

Demographic factors, particularly age and sex, further modify CVH risk. Older age is consistently associated with higher blood pressure, reflecting cumulative exposure to cardiovascular risk.[34] Gender differences are also evident, with Afro-Caribbean women facing distinct cardiovascular vulnerabilities, though limited sex-disaggregated data constrain interpretation.[35]

Finally, structural racism and discrimination underpin many of the aforementioned variables. Longer U.S. residence is associated with greater exposure to racial discrimination and chronic psychosocial stress; both linked to adverse cardiovascular outcomes.[15,36] While ethnic enclaves may provide social support and mitigate stress, these protections may erode over time.[22,37] Collectively, the literature highlights the need for cardiovascular research and interventions that address cultural, environmental, and structural determinants across the life course rather than focusing solely on individual behaviors.

Potential Interventions: Evidence suggests that culturally tailored, preventive strategies are essential for preserving early immigrant health.[5,38,39] Interventions must

be nativity- and origin-specific, account for length of residence, and target the social determinants of health explicitly faced by Afro-Caribbean groups. At the community level, health departments and local organizations could implement culturally adapted cardiovascular education programs anchored in the seven key metrics discussed by Thomas et al.[5]: diet, physical activity, body mass index, blood pressure, cholesterol, glucose, sleep, and smoking. Embedding these programs within trusted community institutions such as churches, Caribbean enclaves, or advocacy groups may support both sustained participation among Afro-Caribbean communities and long-term program sustainability, as these settings promote trust, cultural relevance, and ongoing engagement. Additionally, introducing health navigation support during the early migration period could help new arrivals maintain healthy behaviors within the U.S. food and work environment, thereby mitigating acculturation-related cardiovascular health declines. Expanding access to green spaces and safe walking infrastructure in neighborhoods and workplaces where Afro-Caribbean immigrants reside may promote physical activity and reduce stress, consistent with prior evidence on the health benefits of interventions in the built environment.[30,40] The reviewed studies suggest that effective interventions must go beyond individual behavior change to address the broader social and structural environments shaping Afro-Caribbean CVH.[3,5,13-15] Programs that combine culturally tailored health education with systemic reforms such as disaggregated data reporting, equitable healthcare access, and neighborhood-level resource investment hold the most significant potential to preserve the initial immigrant health advantage and prevent CVH decline across generations.

LIMITATIONS

The findings of this review should be interpreted carefully due to several methodological limitations. First, the review was restricted to studies published between 2019 and 2025 and to articles available in English. These criteria may have excluded earlier or non-English studies that examined cardiovascular health among Afro-Caribbean immigrants, including work that may have incorporated more explicit intersectional or gender-focused analyses. Second, because only six studies met the inclusion criteria, the evidence base remains limited, and the heterogeneity in study designs, populations, and measurement approaches prevented quantitative synthesis. Third, screening and data extraction were conducted by a single reviewer, which may introduce selection or extraction bias. Although the PRISMA flowchart and guidelines were used to enhance consistency, the absence of dual screening or adjudication is a methodological constraint. Fourth, the review did not include a formal risk-of-bias or certainty-of-evidence assessment, which limits the ability to evaluate the methodological rigor of the included studies systematically. Finally, the available literature often aggregated Afro-Caribbean immigrants with other Black immigrant or U.S.-born Black populations, limiting the precision with which cardiovascular risk patterns could be interpreted. As a result, the conclusions drawn from this review reflect the constraints of the existing evidence base rather than the full diversity of Afro-Caribbean health experiences. Future research should incorporate standardized behavioral and psychosocial measures to more clearly elucidate how structural and acculturative factors shape cardiovascular health trajectories among Afro-Caribbean immigrants.

CONCLUSION

The current literature review synthesized current evidence on the cardiovascular health (CVH) trajectories of Afro-Caribbean immigrants in the United States, highlighting the complex interplay of behavioral, structural, socioeconomic, and acculturative factors. Although Afro-Caribbean immigrants often arrive with more favorable cardiovascular profiles than U.S.-born Black populations, a pattern consistent with the healthy immigrant effect emerged. However, this advantage declines with longer residence in the U.S. and across subsequent generations. The evidence demonstrates that these shifts cannot be attributed to behavioral factors alone; structural racism, socioeconomic constraints, and acculturative stress meaningfully shape cardiovascular risk over time.

Across studies, several priorities emerge: the need for disaggregated data that distinguishes Afro-Caribbean subgroups, culturally responsive prevention and clinical strategies, and policy reforms that address the systemic drivers of cardiovascular inequity. Taken together, these findings underscore the importance of developing multi-level interventions that account for duration of U.S. residence, generational status, and broader structural contexts. Such an approach moves beyond individual behavior change to confront the social, cultural, and structural environments that shape cardiovascular health across the Afro-Caribbean immigrant life course.

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Author Biographies

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